LAB: Precipitation Reactions

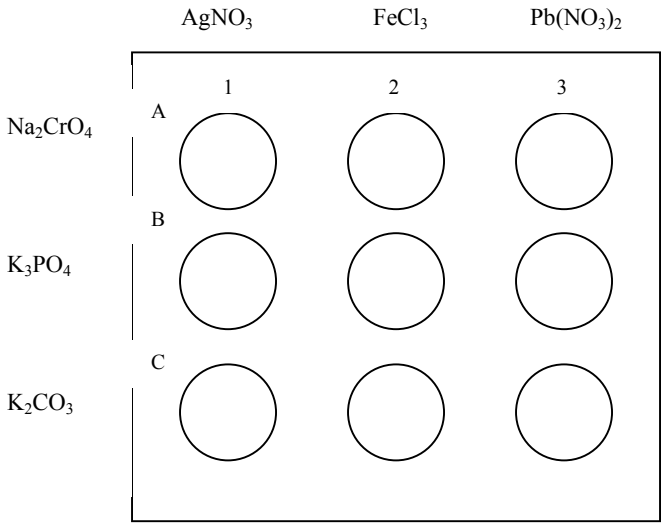
Objective: To write chemical equations for 9 double-replacement reactions, and use the solubility rules chart to identify precipitates.

Materials:

Pipets of: $AgNO_3$, $FeCl_3$, $Pb(NO_3)_2$, Na_2CrO_4, K_3PO_4, K_2CO_3
9-well reaction plate

Procedure:

1. Label a blank piece of paper to be placed under your reaction plate with the following compounds:



2. Locate the pipets containing the 9 compounds. Carefully place 2-3 drops of each solution in the corresponding wells. Each well will have 2 solutions. For example, well A1 will contain Na_2CrO_4 and $AgNO_3$.

3. If a precipitate forms in a well,* write the color of the precipitate (example: "white ppt.") in that well's circle on the diagram above. If the solution is clear, then write "no reaction."

4. For those reactions that formed precipitates, write the chemical equation showing reactants, products, and symbols for aqueous solutions and precipitates. Use the solubility rules chart on p. 344 of your book to identify the precipitate in the reaction.

*How do you know there's a precipitate? A solid will form at the bottom of the well, or the once clear solution will appear cloudy. A transparent solution means no precipitate.

Analysis and Conclusions:

Chemical reactions for wells:

A1:

A2:

A3:

B1:

B2:

B3:

C1:

C2:

C3: